

ILLINOIS DEPARTMENT OF CENTRAL MANAGEMENT SERVICES  
CLASS SPECIFICATION

ELECTRICIAN

POSITION CODE: 13200

Effective: 2-1-19

DISTINGUISHING FEATURES OF WORK:

Under general supervision, performs journey level electrical work; constructs, installs, alters, maintains and repairs electrical systems, equipment and fixtures; may instruct and/or direct trade helpers, inmates and/or unskilled or semi-skilled workers.

ILLUSTRATIVE EXAMPLES OF WORK:

1. Installs and maintains electrical systems which operate on alternating or direct current circuits and high voltage lines, generators, turbines and appliances through panels, switches, meters and circuit breakers.
2. Installs, tests and maintains complex wiring systems, electrical fixtures and apparatus such as pull boxes, switchboards and switches, circuit boards, and outlets, light fixtures, exhaust and circulation fans required for new electrical systems and/or for additions, extensions or alterations to electrical systems. Replaces building lighting ballasts and bulbs.
3. Installs, repairs, and maintains electrical motors and generators; dresses and polishes commutators, seats and replaces brushes, rewinds and replaces coils and armatures, cleans and oils motors, and performs similar work in repairing and replacing parts.
4. Performs electrical repairs and electrical maintenance on electric elevators, switchboards, panels, household appliances, heating, ventilation and air conditioning (HVAC) systems, water heaters, public address systems, security systems, therapy lamps and machines, x-ray equipment and other apparatus utilizing electricity or its effects.
5. Measures, cuts, threads, bends, assembles and installs conduit; draws wire through conduit, splices and solders wires and applies friction tape; terminates high voltage cable and aluminum or copper cable; installs and connects equipment to wiring system.
6. Traces and locates component failures; tests electrical apparatus using voltmeters, amp meters, ohmmeters and other calibration and testing equipment and/or tools to detect shorts, worn out or weak components, and defective connections. Converts motors, refrigerators and other appliances to correct current rating.
7. Performs journey level low voltage electrical work; installs, alters, inspects, repairs and maintains indoor, low voltage electrical systems such as computer mainframes, video display terminals, data (LAN) networks, radios, televisions, security cameras, network/panic buttons, telephones, fax machines and other telecommunications equipment. Terminates connections. Installs, repairs and maintains cable lines and fiber optic cables. Solves low voltage wiring problems using network test sets, telephone test sets and other tools of the trade to restore data and phone connections. Maintains accurate records and drawings.

## ELECTRICIAN (Continued)

8. Performs preventative maintenance inspections of electrical equipment and systems, and initiates work orders to correct deficiencies and prevent breakdowns. Implements a preventive maintenance schedule and performs preventive maintenance such as conducting routine inspections, cleaning, servicing, and making adjustments and minor repairs to prevent malfunction and prolong the life of equipment, systems and structures.
9. Keeps records on work performed and materials used related to daily activities. Maintains and inventories replacement parts, batteries, lights and fuses used for routine maintenance. Orders electrical supplies, equipment and materials with approval from Electrician Foreman or supervisor.
10. Reads and interprets schematics to determine standards and/or procedures to follow in repairing or installing electrical wiring, fixtures, and appliances. Interprets blueprints sketches and specifications in making electrical installations. Makes rough sketches and estimates time, cost and materials required for the completion of work orders, and requisitions materials as necessary.
11. Cleans and maintains equipment and ensures the proper use, repair, and storage of materials, tools and equipment.
12. Moves appliances/furniture and other heavy equipment/objects to access electrical wiring/apparatus to perform maintenance and repairs.
13. Instructs and/or directs trades helpers, inmates and/or unskilled or semi-skilled workers; directs and/or inspects work completed by electrical contractors for quality and conformance with specifications and codes as required with bid specifications.
14. Performs other duties as required or assigned which are reasonably within the scope of duties enumerated above.

## DESIRABLE REQUIREMENTS:

Education and Experience

Requires knowledge, skill and mental development equivalent to completion of four years of high school.

Requires successful completion of a recognized electrician apprenticeship program and four years full-time journey level electrician experience; or 8 years of full-time journey level electrician experience.

Knowledge, Skills and Abilities

Requires working knowledge of the established national, state and local electrical codes.

Requires working knowledge of the tools, methods and standard practices of the trade.

Requires ability to inspect and perceive unsafe or faulty conditions in production, transmission and utilization of electricity.

## ELECTRICIAN (Continued)

Requires ability to read, interpret and work from blueprints, simple sketches, and drawings.

Requires ability to make rough sketches and estimate time, labor, and materials necessary to complete work orders.

Requires ability to work from heights (on ladders, scaffold, platforms, and lifts), stand for long periods, and move heavy equipment, materials, structures and furniture up to 50 pounds independently, and up to 75-100 pounds with assistance.

Requires ability to maintain records related to the work.

Requires ability to instruct and/or direct trades helpers, inmates, and/or unskilled workers or semi-skilled workers.

Requires skill in the use of tools of the trade such as voltmeters, ammeters, ohmmeters and other calibration and testing equipment and apparatus.

May require possession of an appropriate valid driver's license and the ability to travel.